



SOLDIER READING ABILITY

The Advocacy Point of View

**M. A. Fischl
U.S. Army Research Institute**

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The purpose of this presentation is to assume the role of devil's advocate, and provide information and data which may suggest a broader perspective for interpreting the incidence of so-called "literacy" problems in the military services.

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By mid-1977 reports started to reach our office from the Army's Training and Doctrine Command and from its Forces Command, which has cognizance over individuals in operational units, that soldiers did not have adequate literacy skills. We addressed the issue in several ways: one was to consider development of a reading test to serve as a supplement to existing AFQT and ASVAB aptitude area screens; another was to consider modifying the AFQT to increment its reading ability demand; a third was to determine how good a reading screen could be devised directly from the existing ASVAB. This third approach produced some surprises.

In the Fall of 1977, 600 new recruits were administered the USAFI Reading Test, which is a form of the Metropolitan Reading Achievement Test, a fairly universally used and accepted test to evaluate literacy. Also obtained for these individuals were their scores on the 16 subtests of the then operational forms of the basic enlistment battery, ASVAB. Our statistical approach was to regress reading achievement scores on ASVAB scores in order to determine if some combination of ASVAB test scores could serve as a predictor of reading ability.

These correlation coefficients were exceedingly high; that is, the test on which enlistment applicants at that time were screened, correlated about as highly with the reading test as do alternate forms of the same instrument. The visual shows these coefficients.

How, then, might the services be experiencing so-called "literacy" problems when screening on a measure which is as good an indicator of reading ability as the reading test itself?

- a. Reports also reached our office about breaches of ASVAB security. Although, as those r's demonstrate, it is virtually impossible to be illiterate and pass ASVAB fairly, test compromise--knowing some ASVAB answers ahead of time such as occurred in 1978--could have resulted in illiterates being admitted.

ASVAB & LITERACY

Correlation with USAFI
Reading Test, Form D

N = 600

Corrected for
Reading Test Unreliability

<u>ASVAB Test</u>	<u>r</u>	<u>If Reliability = 0.95</u>	<u>If Reliability = 0.90</u>
AFQT	0.78	0.80	0.82
WK	0.79	0.81	0.83
WK + MK + SI	0.84	0.87	0.88
All ASVAB	0.90	0.93	0.95

- b. Later, reports reached our office of ASVAB norms yielding overestimates of qualifications. Army enlistment standards at the time utilized the total battery, setting cuts half a standard deviation below the mean (31st percentile) on 9 job related measures, buttressed by a 16th percentile on the general measure. Although, again, it is virtually impossible for someone who scores within half a sigma of the mean to be weakly literate, ability levels that might in fact be a full sigma or more below the mean would be a very different story.

The bottom line is that it is quite probable that most of the presumed "literacy" problems were not that at all, but were in reality test compromise problems or test norming problems.

Note should be taken that the forms of the ASVAB described in this presentation were subsequently replaced and have not been operational for almost two years.